



Weight Management Finding the Balance

Lynn Kistler

Weight Management Program
Manager

Navy Environmental Health Center

The Problem

- Mismatch between environment & physiology
- Environment
 - Food is everywhere
 - ❖ Especially fast food & junk food
 - Convenient
 - Heavily advertised and marketed
 - Inexpensive
 - Taste good
 - Large portions
 - More meals eaten away from home

The Problem Continues

- Mismatch Between Our Environment & Our Physiology
- Environment
 - Low levels of physical activity
 - Sedentary jobs with long work hours
 - Increase in stress
 - ❖ On the job, commute, and at home
 - More TV & time spent on computers

The Problem Continues

- Healthy Foods
 - ❖ Less accessible
 - ❖ Less convenient
 - ❖ Less Tasty
 - ❖ Not promoted well
 - ❖ High Cost

Excess Weight Increases Risk for:

- **High blood pressure**
- **High cholesterol & triglycerides**
- **Heart disease**
- **Stroke**
- **Diabetes**
- **Cancer (uterine, gallbladder, kidney, stomach, colon, & breast)**
- **Arthritis**
- **Respiratory problems**
- **Infertility**

Disease Prevalence Due to Obesity

Disease	Prevalence (%)
Diabetes	61
Uterine cancer	34
Gallbladder disease	30
Osteoarthritis	24
Hypertension	17
Heart Disease	17
Breast Cancer	11
Colon Cancer	11

Effects of Overweight & Obesity

- 400,000 Deaths occur annually
- 70% Obese have ≥ 1 comorbid condition
- \$117 Billion spent annually on direct and indirect health care costs
- \$33 Billion Spent Yearly on Weight-Loss Products

What to Do?

- Public Health Campaigns
 - Walking & taking the stairs programs
 - Promote decrease in calorie intake
 - Government Policy – Local & Federal
 - Conduct media-awareness campaigns

Volumetrics

Fill Up and Not Out

According to Barbara Rolls, PhD,
Pennsylvania State University:

- We eat more when we are given more
- Package size influences us to eat more
- We don't compensate for eating too much at one meal
- Having access to big portions can override our natural sense of fullness

Making Sense of Eating

We eat with all 5 senses

Eating may start with the

- ❖ Nose
- ❖ Eyes
- ❖ Hearing
- ❖ Mind
- ❖ Taste

Volumetrics

Fill Up and Not Out

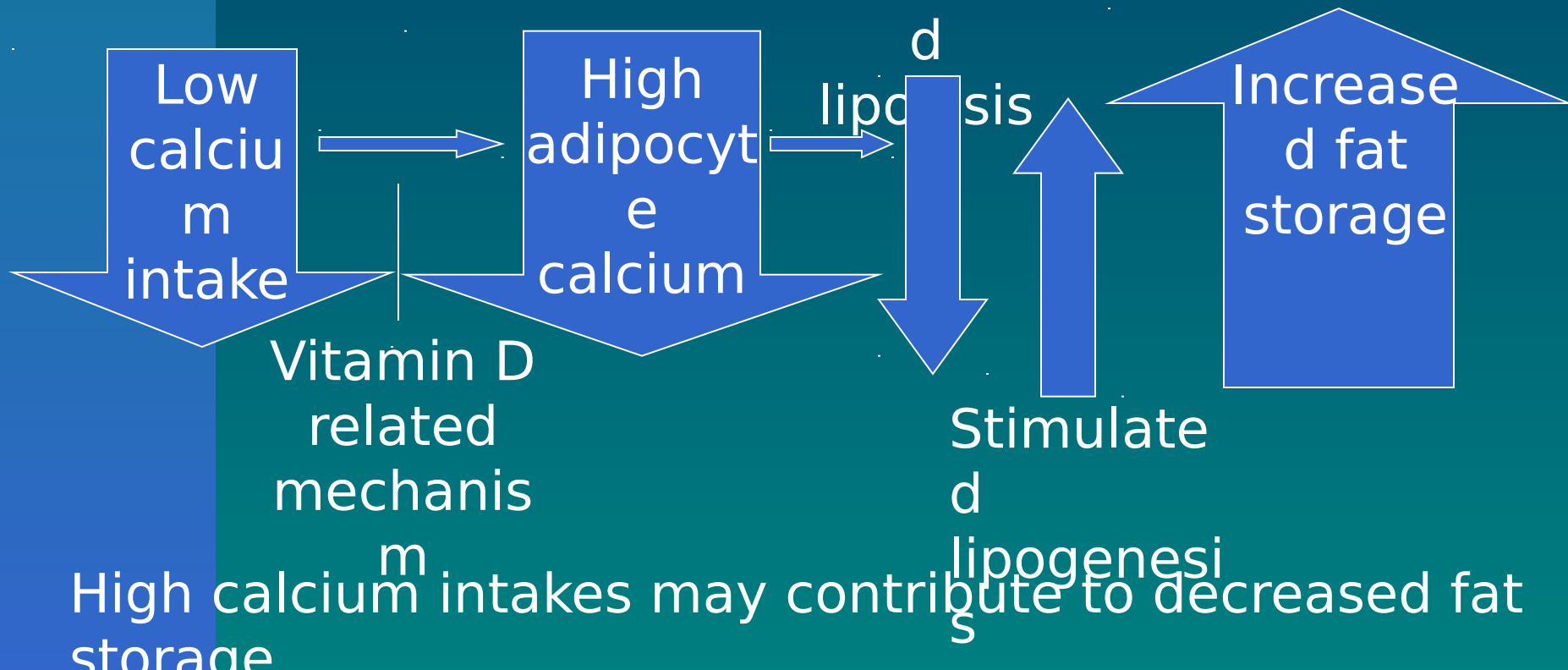
- Volumetrics' Strategy
 - Water in foods helps fill you up
 - Add fruits and vegetables to recipes
 - ❖ soups
 - ❖ Casseroles
 - High fiber diet
 - 5 A Day – Fruits and Vegetables

Calcium

More Than for the Bones

Low Calcium Intakes Lead to High Intracellular Calcium & Increased Fat Storage

Animal studies suggest an effect on lipid metabolism



Relationship Between Calcium Intake and Weight

- Women age 18-28: who consume calcium below median are twice as likely to be overweight
- Women age 35-58: with low calcium intake are more likely to have midlife weight gain
- Women 59-89: given calcium supplement (1,200 mg.) in a study lost significantly more weight than control group

Calcium Promotes Weight Loss In Humans

Study conducted by Zemel MB, Thompson W, Zemel P, et al.

Group	Calcium Source	Daily Calcium Intake	Mean Decrease Weight	Mean % Fat Loss Trunk Region
Control	Placebo	400-500 mg calcium	6.4%	19.0%
High Calcium	800 mg/d calcium supplement	1,200-1,300 mg calcium	8.1%	50.1%
High Dairy	3-4 dairy products/d	1,200-1,300 mg calcium	10.9%	66.2%

Note: all groups had a 500 calorie/day deficit

Sleep Getting Enough ZZZZs?

- 65% of Americans are not getting enough of the recommended 8 hours
- 31% report getting less than 7 hours
- 10% of adults suffer from chronic insomnia
- Lack of sleep has been found to increase risk for:
 - ◇ High blood pressure
 - ◇ Heart failure
 - ◇ Obesity
 - ◇ CAD
 - ◇ Stroke
 - ◇ Diabetes

Sleep and Weight

- Lack of sleep may increase hunger
- Affect body's metabolism
 - Make it more difficult to maintain or lose weight
- Sleep loss appears to:
 - Make you feel hungry even if full
 - Increases fat storage

What Works

National Weight Control Registry

- **90% Lost weight with both diet & PA**
- **72% Met or exceeded current Public Health Guidelines for physical activity (>1,000 calories/wk)**
- **Walking predominant form of exercise**
- **Ate < 1 fast food & 2.5 meals away from home per week**
- **92% Limited intake of certain foods**
- **33% Consume $\leq$ 20% calories from fat**

Resources

- Navy Nutrition & Weight Control Self-Study Guide
 - <http://www.bupers.navy.mil/services/weight.html>
- Peak Performance Through Nutrition & Exercise
 - <http://www-nehc.med.navy.mil/hp/nutrit/peak.htm>
- Performance Power – Module 7 Performance Your Weigh
 - http://www-nehc.med.navy.mil/hp/nutrit/Nutr_resources.htm
- NEHC Weight Mgt, Nutrition, Physical Fitness & Stress Mgt Websites
 - www-nehc.med.navy.mil/hp